REMARKS

In the above-mentioned Office Action, all of the pending claims, claims 1, 7-13, and 18-21, were rejected. Claims 1, 7-13, and 18-21 were rejected under §103(a) over the combination of Alamouti and Wei. The claims were further rejected under §112, first paragraph. Claims 1 and 13 include the recitations of longer-than-average length while the description set forth the term longer length. And, in claim 21, the terminology shorter-than-average length was recited while the description set forth the terminology shorter length. Additionally, objection was made to claims 1, 7-13, and 18-21 for the recitation of various phrases. And, objection was made to the drawings for the reason that no demodulator was shown while claim 10 recites a demodulator.

Responsive to the rejections of the claims, the claims have been amended in manners believed better to distinguish the present invention over the cited combination of references, to overcome the §112 rejections thereof, and to overcome the objections made to the claims.

Additionally, claim 10 that recites a demodulator, has been canceled.

With respect to exemplary claim 1, the claim has been amended, now to recite that the multi-dimensional trellis-coded modulator has a signal constellation partitioned into subsets of increasing minimum squared distances. Support for this recitation is found, for instance, on page 9, lines 27-28. The claim has further been amended to recite that the modulator convolutionally encodes the data according to a rule of correspondence comprising defining interest subset transitions to correspond to longer length transitions and to define intersubset transitions to correspond to intersubset transitions. Support for these recitations are found, for instance, on page 9, lines 27-30 and page 10, lines 1-3. Method claim 13 has been analogously amended.

The Examiner acknowledged that Alamouti fails to disclose multidimensionality and also fails to teach the rule of correspondence. The Examiner relies upon Wei for showing multi-dimensional trellis-coded modulation, implementing intrasubset and intersubset, and the rule of correspondence.

To the extent that the Examiner asserts that Wei discloses a correspondence rule in which intrasubset transitions correspond to longer length transitions and intersubset transitions

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correspond to shorter length transitions, such assertion is respectfully traversed. Additionally, Wei does not appear to show partitioning of a signal constellation into subsets of increasing minimum squared distances.
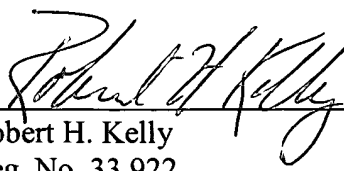
The section of the Wei reference, column 4, lines 15-63 and column 5, lines 16-41, do not appear to disclose such structure of corresponding method. Column 4, lines 60-62, in fact, indicates that 256 4D symbols are formed into eight subsets, each subset containing 32 4D symbols. Contrast is made, e.g., with the constellations shown in Figures 3-4 of the present application.

As Wei fails to disclose the structure, or corresponding method, as now recited, the teachings of this disclosure, when combined with Alomouti, do not form the invention, as now recited.

Accordingly, claims 1 and 13, and the remaining ones of the dependent claims, are believed to be distinguishable over the cited combination. And, as the claims have been amended in manners believed to overcome the objections to the claims and the §112 rejections thereof, the claims, as now-amended, are believed to be in condition for allowance. Accordingly, reexamination and reconsideration for allowance of the claims is respectfully requested. Such early action is earnestly solicited.

Respectfully submitted,

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